

158 CLAIMS:

159 1. A watertight door seal integrity verification assembly comprising:

160 a watertight door in a frame;

161 a gasket disposed in a channel around the periphery of said door;

162 a closure edge of said frame positioned to compress said gasket upon
163 latching said door shut;164 a transmission line embedded in said gasket and operatively coupled to a
165 time domain reflectometry device;166 a display assembly responsive to said time domain reflectometry device
167 to indicate the status of the gasket compression.168 2. A watertight door seal integrity verification assembly as in claim 1, wherein
169 said transmission line is a twisted pair of insulated wire.170 3. A watertight door seal integrity verification assembly as in claim 1, wherein
171 said transmission line is a coaxial cable.

172 4. A seal integrity checking system comprising:

173 an inner conductive waveguide;

174 a dielectric layer coaxial with said inner waveguide;

175 an outer conductive waveguide coaxial with said dielectric layer and said
176 inner waveguide;177 a seal layer arranged to wrap around said outer waveguide, said dielectric
178 layer and said inner waveguide;179 a pulse generator operatively connected to said inner and outer
180 waveguides; and181 a pulse detector operatively connected to said inner and outer
182 waveguides, whereby reflected pulses are detected indicating an area where the
183 seal is not compressed adequately.

184 5. A seal integrity checking system comprising:

185 a gasket disposed around the periphery of a door;
186 a first insulated conductive waveguide embedded in said gasket;
187 a second insulated conductive waveguide embedded in said gasket;
188 a pulse generator operatively connected to said first and second
189 waveguides; and
190 a pulse detector operatively connected to said first and second
191 waveguides, whereby reflected pulses are detected indicating an area where the
192 seal is not compressed adequately.

193 6. A seal integrity checking system as in claim 5, wherein said waveguides are
194 insulated wires.